

TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

WYOMING

SOIL CONSERVATION SERVICE

Biology No. 104

January 1986

Subject: DESERT COTTONTAIL*

General

The desert cottontail (Sylvilagus audubonii) lives primarily in the Lower and Upper Canoran life zones, but is also found in the Transition zone. The most important factors influencing habitat use by desert cottontails in pinyon-juniper woodlands are "cover composition and relative densities of live trees, shrubs, and brush piles."

Desert cottontails in Colorado are found at elevations below about 7,000 feet.

Food Requirements

Desert cottontails are herbivores. Available food plant species are not as important as moisture content and growth stage. During one 16-month study, cottontails consumed 75 percent of the available grass and forb genera and 67 percent of the available shrub and tree genera in their habitat. In general, however, shrubs are preferred during new leaf growth, grasses are preferred overall, and forbs are eaten when available, especially during the wet season.

Cottontail use of a habitat is not affected if the production of herbaceous vegetation is within the range of 150-370 pounds per acre (16.8-41.5 g/m²).



Prepared by: Richard Rintamaki, State Biologist

LCJ
State Resource Conservationist

*Information taken from Ecoregion M3113 Handbook and Habitat Suitability Index Models, Wildlife Species Narratives (literature searches), U.S. Fish and Wildlife Service, various dates between 1978-1984.

Water Requirements

Desert cottontails adjust their feeding patterns to prevailing moisture conditions. They can apparently survive drought periods using cactus and forbs with a high moisture content as a source of water. One study reported that free water may be critical in years that are unusually dry.

Cover Requirements

Shrubs furnish the primary cover for desert cottontails in pinyon-juniper woodlands. Optimal habitat consists of 70 to 90 shrubs and/or downed trees (which can serve in lieu of shrubs as cover) per acre (0.4 ha). Living trees are not necessary for optimal habitat, but can influence habitat conditions when their numbers exceed 160 per acre (0.4 ha) by suppressing shrub growth.

In a study done in the same area, habitat use was low on sites with no living shrubs. It was stated, "Habitat use was progressively low for sites with brush piles alone, live trees and brush piles, meadows and sites without woody cover, and live trees alone."

Reproductive Requirements

The nest is a pear-shaped excavation in the ground, 6-10 in. (15.2-25.4 cm) deep with a 6-inch (15.2 cm) diameter across the largest part. It is lined with a thick layer of fine grasses and dried weeds and filled with rabbit fur.

Special Habitat Requirements

No special habitat requirements for the desert cottontail were found in literature.

Interspersion Requirements

Where food supplies are not adequate in the woodland or shrubland types, other vegetative types may be necessary. These types, if needed, must be within a distance equal to or less than the cruising radius of the cottontails in order to be usable. One study reported that the foraging areas within which most cottontails stayed had an average diameter of 700 feet (213.4 m) and an upper limit of 2,100 feet (640.1 m). Another study described the home range as approximately one acre (0.4 ha) for females to 15 acres (6.2 ha) for males.

Special Considerations

Cottontails are attracted to agricultural lands, especially where thickets are present.

One study found that slope and aspect did not significantly affect cottontail use, although cottontails showed a slight preference for moderate and steep slopes.